

WHAT IS CLAIMED IS:

1. A system for carrying out an on-line group-buying sale for a featured item, which comprises:

5 (a) an e-commerce server data processing system, said e-commerce server data processing system including e-commerce server software executable on said e-commerce server data processing system and configured to define the on-line group-buying sale of the featured item; and

10 (b) a buyer client data processing system coupled to said e-commerce server data processing system, said buyer client data processing system including client software executable on said buyer client data processing system and configured to receive a buyer input for making an offer in the on-line group-buying sale of the featured item, and to transmit the buyer offer to said e-commerce server data processing system, said e-commerce server software being configured to transmit at least some information
15 defining the on-line group buying sale to said buyer client data processing system, said e-commerce server software further being configured to define a value curve for the featured item representing an increasing value of the featured item as more buyers make offers in the on-line group-buying sale.

20 2. The system for carrying out an on-line group-buying sale for a featured item of claim 1 in which said e-commerce server software is further configured to define the on-line group-buying sale as a sale of a telephone calling service.

25 3. The system for carrying out an on-line group-buying sale for a featured item of claim 2 in which said e-commerce server software is further configured to define the value curve for the featured item as representing an increasing number of free calling minutes.

4. The system for carrying out an on-line group-buying sale for a featured item of claim 1 in which said e-commerce server software is further configured to define the on-line group-buying sale as a sale of a rebate for use in purchasing a good or service.

5. The system for carrying out an on-line group-buying sale for a featured item of claim 4 in which said client software is further configured to define the value curve for the featured item as representing an increasing face value of the rebate.

6. The system for carrying out an on-line group-buying sale for a featured item of claim 4 in which said client software is further configured to define the rebate as a rebate for use in purchase of an automobile.

7. The system for carrying out an on-line group-buying sale for a featured item of claim 1 in which said e-commerce server software is further configured to define the on-line group-buying sale as a sale of a bank certificate of deposit.

8. The system for carrying out an on-line group-buying sale for a featured item of claim 7 in which said e-commerce server software is further configured to define the value curve for the featured item as representing an increasing interest rate for the bank certificate of deposit.

9. A computer-implemented process for carrying out an on-line group-buying sale for a featured item, which includes the steps of:

- (a) defining the on-line group-buying sale of the featured item;
- (b) receiving buyer inputs for making offers in the on-line group-buying sale of the featured item; and
- (c) increasing the value of the featured item as more buyers make offers in the on-line group-buying sale.

10. The process for carrying out an on-line group-buying sale for a featured item of claim 9 in which the on-line group-buying sale is defined as a sale of a telephone calling service.

11. The process for carrying out an on-line group-buying sale for a featured item of claim 10 in which the value of the featured item is increased as more buyers make offers by providing an increasing number of free calling minutes.

12. The process for carrying out an on-line group-buying sale for a featured item of claim 9 in which the on-line group-buying sale is defined as a sale of a rebate for use in purchasing a good or service.

13. The process for carrying out an on-line group-buying sale for a featured item of claim 12 additionally comprising the step of:

(d) defining a value curve for the featured item as representing an increasing face value of the rebate.

14. The process for carrying out an on-line group-buying sale for a featured item of claim 9 in which the rebate is defined as a rebate for use in purchase of an automobile.

15. The process for carrying out an on-line group-buying sale for a featured item of claim 9 in which the on-line group-buying sale is defined as a sale of a bank certificate of deposit.

16. The process for carrying out an on-line group-buying sale for a featured item of claim 15 in which the value of the featured item is increased as more buyers make offers by increasing an interest rate for the bank certificate of deposit.

17. An article of manufacture, which comprises a computer readable medium having stored therein a computer program carrying out an on-line group-buying sale for a featured item, the computer program comprising:

- (a) a first code segment defining the on-line group-buying sale of the featured item;
- (b) a second code segment for receiving buyer inputs for making offers in the on-line group-buying sale of the featured item; and
- (c) a third code segment for increasing the value of the featured item as more buyers make offers in the on-line group-buying sale.

18. The article of manufacture of claim 17 in which the first code segment defines the on-line group-buying sale as a sale of a telephone calling service.

19. The article of manufacture of claim 18 in which the third code segment increases the value of the featured item as more buyers make offers by providing an increasing number of free calling minutes.

20. The article of manufacture of claim 17 in which the first code segment defines the on-line group-buying sale as a sale of a rebate for use in purchasing a good or service.

21. The article of manufacture of claim 20 additionally comprising:

- (d) a fourth code segment for defining a value curve for the featured item as representing an increasing face value of the rebate.

22. The article of manufacture of claim 21 in which the fourth code segment defines the rebate as a rebate for use in purchase of an automobile.

23. The article of manufacture of claim 17 in which the first code segment defines the on-line group-buying sale as a sale of a bank certificate of deposit.

24. The article of manufacture of claim 23 in which the third code segment increases the value of the featured item as more buyers make offers by increasing an interest rate for the bank certificate of deposit.

25. A system for carrying out an on-line group-buying sale for a featured item, which comprises:

(a) an e-commerce server data processing system, said e-commerce server data processing system including e-commerce server software executable on said e-commerce server data processing system and configured to define the on-line group-buying sale of the featured item as a rebate for purchase of a good or service; and

(b) a buyer client data processing system coupled to said e-commerce server data processing system, said buyer client data processing system including client software executable on said buyer client data processing system and configured to receive a buyer input for making an offer in the on-line group-buying sale of the rebate, and to transmit the buyer offer to said e-commerce server data processing system, said e-commerce server software being configured to transmit at least some information defining the on-line group buying sale to said buyer client data processing system.

26. The system for carrying out an on-line group-buying sale for a featured item of claim 25 in which said client software is further configured to define a value curve for the featured item representing an increasing face value of the rebate.

27. The system for carrying out an on-line group-buying sale for a featured item of claim 25 in which said client software is further configured to define the rebate as a rebate for use in purchase of an automobile.

28. A computer-implemented process for carrying out an on-line group-buying sale for a featured item, which includes the steps of:

(a) defining the on-line group-buying sale of the featured item as a sale of a rebate for use in purchasing a good or service;

(b) receiving buyer inputs for making offers in the on-line group-buying sale of the rebate; and

(c) changing terms of the rebate sale as more buyers make offers in the on-line group-buying sale.

29. The process for carrying out an on-line group-buying sale for a featured item of claim 28 additionally comprising the step of:

(d) defining a value curve for the featured item as representing an increasing face value of the rebate.

30. The process for carrying out an on-line group-buying sale for a featured item of claim 28 in which the rebate is defined as a rebate for use in purchase of an automobile.

31. An article of manufacture, which comprises a computer readable medium having stored therein a computer program carrying out an on-line group-buying sale for a featured item, the computer program comprising:

(a) a first code segment defining the on-line group-buying sale of the featured item as a sale of a rebate for use in purchasing a good or service;

(b) a second code segment for receiving buyer inputs for making offers in the on-line group-buying sale of the rebate; and

(c) a third code segment for changing terms of the rebate sale as more buyers make offers in the on-line group-buying sale.

32. The article of manufacture of claim 20 additionally comprising:

(d) a fourth code segment for defining a value curve for the rebate as representing an increasing face value of the rebate.

33. The article of manufacture of claim 31 in which the first code segment defines the rebate as a rebate for use in purchase of an automobile.

34. A system for carrying out an on-line group-buying sale for a credit instrument, which comprises:

(a) an e-commerce server data processing system, said e-commerce server data processing system including e-commerce server software executable on said e-commerce server data processing system and configured to define the on-line group-buying sale of the credit instrument; and

(b) a buyer client data processing system coupled to said e-commerce server data processing system, said buyer client data processing system including client software executable on said buyer client data processing system and configured to receive a buyer input for making an offer in the on-line group-buying sale of the credit instrument, and to transmit the buyer offer to said e-commerce server data processing system, said e-commerce server software being configured to transmit at least some information defining the on-line group buying sale to said buyer client data processing system.

35. The system for carrying out an on-line group-buying sale for a credit instrument of claim 34 in which said client software is further configured to define a value curve for the credit instrument representing an increasing premium awarded with the credit instrument.

36. The system for carrying out an on-line group-buying sale for a credit instrument of claim 34 in which said client software is further configured to define a value curve for the credit instrument representing a decreasing interest rate for the credit instrument as more buyers join the on-line group-buying sale.

37. A computer-implemented process for carrying out an on-line group-buying sale for a credit instrument, which includes the steps of:

- (a) defining the on-line group-buying sale of the credit instrument;
- 5 (b) receiving buyer inputs for making offers in the on-line group-buying sale of the credit instrument; and
- (c) changing terms of the credit instrument sale as more buyers make offers in the on-line group-buying sale.

10 38. The process for carrying out an on-line group-buying sale for a credit instrument of claim 37 additionally comprising the step of:

- (d) defining a value curve for the credit instrument representing an increasing premium awarded with the credit instrument as more buyers join the on-line group-buying sale.

15 39. The process for carrying out an on-line group-buying sale for a credit instrument of claim 37 additionally comprising the step of:

- (d) defining a value curve for the credit instrument representing a decreasing interest rate for the credit instrument as more buyers join the on-line group-buying sale.

20 40. An article of manufacture, which comprises a computer readable medium having stored therein a computer program carrying out an on-line group-buying sale for a credit instrument, the computer program comprising:

- (a) a first code segment defining the on-line group-buying sale of the credit instrument;
- 25 (b) a second code segment for receiving buyer inputs for making offers in the on-line group-buying sale of the credit instrument; and
- (c) a third code segment for changing terms of the credit instrument sale as more buyers make offers in the on-line group-buying sale.

~~41. The article of manufacture of claim 40 in which the third code segment changes terms of the credit instrument sale by increasing a premium awarded with the credit instrument as more buyers join the on-line group-buying sale.~~

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42. The article of manufacture of claim 40 in which the third code segment changes terms of the credit instrument sale by decreasing an interest rate for the credit instrument as more buyers join the on-line group-buying sale.

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Figure 6. The effect of the number of iterations on the accuracy of the proposed algorithm. The figure shows two plots side-by-side. The left plot shows the accuracy of the proposed algorithm (Proposed) compared to the standard algorithm (Standard). The right plot shows the accuracy of the proposed algorithm (Proposed) compared to the standard algorithm (Standard).